

# Exhibit A-1

## **EXHIBIT A-1**

### **CREDIT IMPACT DAMAGES**

Terms defined in the Amended Stipulation and Agreement shall have the same meaning in this Exhibit A-1.

#### **A. Overview/Information Considered**

Credit Impact Damages are calculated by estimating the amount of additional borrowing costs that a consumer would have incurred if an unauthorized event (or unauthorized events) caused negative credit score impact (“Credit Injury”) and adjusting the estimated additional borrowing costs to take into account the probability that the consumer actually did incur additional borrowing costs as a result of Credit Injury. In order to calculate Credit Impact Damages, it is necessary to consider for each consumer:

- a) The amount of Credit Injury (described below), if any;
- b) The probability that Credit Injury actually increased the consumer’s borrowing costs by lowering the consumer’s credit rating to a less favorable credit pricing (borrowing cost) level (“Inter-Tier Migration”);
- c) The amount borrowed by the consumer (Credit Tradeline) that was exposed to Inter-Tier Migration from Credit Injury;
- d) The date(s) that the consumer acquired a Credit Tradeline or Credit Tradelines;
- e) The types of Credit Tradelines acquired;
- f) The estimated impact upon borrowing rates from Inter-Tier Migration based on type of Credit Tradeline; and
- g) The estimated time that consumers generally hold each type of Credit Tradeline.

#### **B. Explanation of Information Considered**

##### **I. Credit Injury**

Credit Injury for non-delinquency/derogatory consumers is based upon the difference between the consumer’s actual FICO 8 score three months after an unauthorized event and the FICO 8 Score that would have existed at the same time absent the unauthorized event(s) or “but-for FICO 8 score.” If a consumer’s actual FICO 8 score is equal to or higher than the but-for FICO 8 score, Credit Injury has not occurred, and Credit Impact Damages are equal to zero. If the but-for FICO 8 score is higher than the actual FICO 8 score, then Credit Injury has occurred. For the purpose of this document, Credit Injury is equal to the reduction from but-for FICO 8 score to actual FICO 8 score (if any) expressed as a decline in points. For example, if a consumer’s but-for FICO 8 score is 712 and the actual FICO 8 score is 700, Credit Injury is 12 points.

**Credit Injury Example:**

But-for FICO 8 score = 712

Actual FICO 8 score = 700

Credit Injury =  $712 - 700 = 12$  points.

**II. Probability of Credit Cost Injury**

If, for a given consumer, Credit Injury has occurred, the next step is to estimate the probability that the Credit Injury actually exposed the consumer to potentially higher borrowing costs through Inter-Tier Migration. If negative Inter-Tier Migration has occurred, then the consumer has been exposed to “Credit Cost Injury.” The probability of Credit Cost Injury will be estimated for each consumer by comparing Credit Injury to an overall distribution of FICO 8 scores (or other reasonable FICO distribution if data availability necessitates) for the US population as a whole. Using the example above, if Credit Injury for a given consumer is 12 points, and if the width of the credit tier (the range of credit scores that qualify for the same borrowing cost or interest rate) is 100 points, and the distribution of credit scores within the tier is uniform (FICO 8 scores evenly spread throughout the tier), then the probability that Credit Injury exposed the consumer to Credit Cost Injury is 12%.

**Probability of Credit Cost Injury Example:**

Credit Injury = 12 points

Tier width = 50 points

Distribution of FICO 8 scores (or alternate scores) = uniform

Probability of Credit Cost Injury =  $12/50 = 24\%$

The widths of credit tiers, the number of tiers, and the distribution of credit scores within tier will be estimated separately for each type of credit line by examination of the relevant literature. The values shown here are for illustration.

**III. Amount Borrowed by Consumer (Credit Tradeline)**

The amount borrowed by the consumer will be determined by review of the three major Credit Reporting Agencies’ reports. The amount borrowed will take into account, as necessary, a declining balance over the life of the loan. The resulting “Amount Borrowed” or “Tradeline Amount” will be the average Credit Tradeline balance over the life of the consumer’s loan. For the case of a line of credit or credit card, the Credit Reporting Agencies return the credit limit, rather than the actual amount borrowed. As a result, the average fraction of the credit limit actually consumed as reported by the New York Federal Reserve Bank data or comparable data will be used in place of the actual amount borrowed.

**Amount Borrowed by Consumer – Credit Tradeline Example:**

Consumer borrows \$28,000 for a vehicle purchase. Over a four-year period that the consumer holds the loan, the average balance is \$18,000. \$18,000 will be the “Amount Borrowed” or “Tradeline Amount.”

As a second example, a consumer opens a credit card account with a credit limit of \$10,000. According to the New York Federal Reserve, the average consumer credit card debit is approximately 22% of the credit limit, so the “Amount Borrowed” will be assumed to be \$2,200 for this consumer.

#### **IV. Date of Credit Tradeline Acquired**

The date of Credit Tradeline acquired represents the reported date that the consumer acquired the Credit Tradeline. For non-delinquency/derogatory consumers, Credit Tradelines considered for Credit Impact Damages are those acquired within the 12 full calendar months following the date of the event(s). For non-delinquency/derogatory consumers, Credit Tradelines acquired after the 12 full calendar months following the date of the event(s) will not be eligible for Credit Impact Damages.

##### **Date of Credit Tradeline Acquired Example:**

Within the 12 full calendar months following the date of the event(s) = eligible;

Not within the 12 full calendar months following the date of the event(s) = not eligible.

#### **V. Types of Credit Tradeline(s) Acquired**

This information will be used to determine the average duration of Credit Tradelines, the change in borrowing cost associated with Inter-Tier Migration, and the tier width.

#### **VI. Estimated Impact on Borrowing Costs from Inter-Tier Migration**

This variable estimates the amount of increase in interest rate from negative migration of one or more credit tiers. For example, if Tier 1 auto loan customers paid an average interest rate of 3.25%, and Tier 2 auto loan customers paid an average interest rate of 5.25%, then the estimated impact on borrowing costs from Inter-Tier Migration would be 2%. The costs of Inter-Tier Migration shown here are for illustration only, and may be modified upon further research.

##### **Estimated Impact on Borrowing Costs from Inter-Tier Migration Example:**

Tier 1 auto loan average interest rate: 3.25%

Tier 2 auto loan average interest rate: 5.25%

Impact from Inter-Tier Migration of one tier = 2%

#### **VII. Estimated Time that Consumers Held Each Type of Credit Tradeline**

This variable will be estimated based upon research and analysis of publicly available data and documents, such as Federal Reserve Board releases. This variable estimates the average amount

of time that consumers held various types of Credit Tradelines for the purpose of determining the time period during which consumers may have been exposed to higher borrowing costs.

**Estimated Time that Consumers Held Each Type of Credit Tradelines Example:**

Credit Tradelines type: auto loan

Average amount of time that consumers held auto loans: 4 years

Estimated time that consumer held Credit Tradelines: 4 years.

Note: This value is assumed for the purpose of this example.

**VIII. Credit Impact Damage**

Consumer #123A experienced a hard credit pull and an unauthorized line of credit on February 7, 2012. The but-for FICO 8 score in May 2012 was 712. The actual FICO 8 score in May 2012 was 700. Credit Injury was 12 points. In January 2013, the consumer voluntarily took out a Credit Tradelines in the form of an auto loan with an initial balance of \$27,000. Since this date is within 12 full calendar months of the event(s), the consumer is eligible for Credit Impact Damages. Based on the 4-year assumed average life of auto loans, and a declining balance over the life of the loan, the average loan balance during those four years would have been \$18,000. The 12-point Credit Injury resulted in a 12% probability that the consumer suffered negative Inter-Tier Migration. If the Inter-Tier Migration indeed occurred, then the consumer's interest rate would have risen from 3.25% to 5.25% or 2 percentage points.

**Credit Impact Damage Example:**

$\$18,000 \text{ Average Loan Balance} * 0.02 (2\%) * 24\% \text{ probability of Inter-Tier Migration} * 4 \text{ years}$   
 $= \$345.60$

**D. Credit Impact Damages with Delinquency/Derogatory**

**I. Overview/Information Considered**

Credit Impact Damages with delinquency/derogatory are conceptually the same as Credit Impact Damages without delinquency/derogatory. However, the potential severity of Credit Injury when delinquency/derogatory indicators exist may change. The first change is that consumers may be eligible for Credit Impact Damages for a period up to seven years following the event(s). The second is that the longer time frame of the analysis and potentially different level of Credit Injury leads to a slight modification of the timing of calculations. Each of the "Information Considered" categories from above is present in the Credit Impact Damages with delinquency/derogatory analysis, but the following elements of the analysis change.

**II. Credit Injury with Delinquency/Derogatory—Modification of Calculations**

Credit Injury for delinquency/derogatory consumers is based upon the difference between the consumer's actual FICO 8 score(s) prior to the consumer's acquisition of each Credit Tradelines and the FICO 8 scores that would have existed at the same times absent the unauthorized event(s), which includes the suppression of the effects of the delinquency/derogatory indicators.

or “but-for FICO 8 scores.” As in the Credit Injury without delinquency/derogatory analysis, if any of the consumer’s actual FICO 8 scores is equal to or higher than its corresponding but-for FICO 8 score, Credit Injury has not occurred in that instance, and Credit Impact Damages in that instance are equal to zero. If the but-for FICO 8 score is higher than the actual FICO 8 score in that instance, then Credit Injury has occurred. Since the time frame for the analysis of Credit Injury with delinquency/derogatory is up to seven years, consumers may have some instances of Credit Injury and some instances in which the acquisition of a Credit Tradeline is not subject to Credit Injury. For the purpose of this example, Credit Injury is equal to the reduction from but-for FICO 8 score to actual FICO 8 score (if any) expressed as a decline in points. For example, if a consumer’s but-for FICO 8 score prior to acquisition of the first Credit Tradeline is 742 and the actual FICO 8 score is 700, Credit Injury is 42 points for the purpose of evaluating that Credit Tradeline. If, four years later, the but-for FICO 8 score prior to the acquisition of the second Credit Tradeline is 722 and the actual FICO score is 702, Credit Injury for the purpose of evaluating the second Credit Tradeline is 20 points. If, at some point after the acquisition of the second Credit Tradeline but within seven years of the event, the but-for FICO 8 score is 719 prior to the acquisition of a Credit Tradeline, and the actual FICO 8 Score is 720, then the consumer has no Credit Injury for the third Credit Tradeline. For reasons of efficient data collection and higher potential Credit Injury in this analysis (which would be less sensitive to short-term timing variation), actual and but-for FICO 8 scores are determined prior to the acquisition of each Credit Tradeline.

#### **Credit Injury Example:**

But-for FICO 8 score for Credit Tradeline 1 = 762

Actual FICO 8 score = 700

Credit Injury for Credit Tradeline 1 =  $762 - 700 = 62$  points.

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But-for FICO 8 score for Credit Tradeline 2 = 722

Actual FICO 8 score = 702

Credit Injury for Credit Tradeline 2 =  $722 - 702 = 20$  points.

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But-for FICO 8 Score for Credit Tradeline 3 = 719

Actual FICO 8 Score = 720

Credit Injury for Credit Tradeline 3 =  $719 - 720 = \text{No Credit Injury}$

### **III. Credit Impact Damage With Delinquency/Derogatory Example**

Consumer #123A experienced a hard credit pull and an unauthorized line of credit on February 7, 2012. The unauthorized line of credit becomes delinquent and is reported to Credit Reporting Agencies. In January 2013, the consumer voluntarily took out a Credit Tradeline in the form of

an auto loan with an initial balance of \$27,000. Prior to that Credit Tradeline, the consumer's but-for FICO 8 score is 762. The actual FICO 8 score is 700. Credit Injury associated with this Credit Tradeline ("Tradeline 1") is 62 points. Since this date is within 7 years of the event(s), the consumer is eligible for Credit Impact with Delinquency/Derogatory Damages. Based on the 4-year assumed average life of auto loans, and a declining balance over the life of the loan, the average loan balance during those four years would have been \$18,000. If the width of a credit tier is 50 points, the consumer is certain to suffer one Inter-Tier Migration, and will suffer two Inter-Tier Migrations with estimated probability of  $(62-50)/50 = 0.24$ , assuming for illustration a uniform distribution of FICO 8 credit scores within tier. If each Inter-Tier Migration results in a 2% increase in borrowing cost, then the consumer will suffer borrowing rate 2% higher with probability .76 and 4% higher with probability 0.24. The numeric values given in the paragraph are for illustration and may or may not reflect the values that will actually be used in the final calculations.

If, after four more years, the consumer purchased and financed a second vehicle for \$30,000 with an expected average balance of \$20,000 and an expected duration of the Credit Tradeline of four years, the assumed Credit Injury of 20 points would make the second vehicle loan ("Tradeline 2") eligible for Credit Impact Damage calculation. For Tradeline 2, the 20-point Credit injury is assumed to result in a 40% probability that Inter-Tier Migration would have occurred, and as in the prior example, the assumed interest rate increase from Inter-Tier Migration would be 2 percentage points per tier.

In this example, the hypothetical consumer acquires a third tradeline ("Tradeline 3"), which happens to be a mortgage that was acquired within seven years of the event. However, following the assumption above, no Credit Injury exists because the FICO 8 score has recovered to its but-for level. Thus, the third Credit Tradeline would not be eligible for Credit Impact Damages, although Tradelines 1 and 2 would be.

### **Credit Impact Damage Calculation for Hypothetical Consumer with Delinquency/Derogatory**

#### **Tradeline 1**

\$18,000 average loan balance \*  $[0.02 * .76 + 0.04 * .24]$  rate increases times probability of those rate increases \* 4 years = \$749.95

#### **Tradeline 2**

\$20,000 average loan balance \* 0.02 (2%) \* 40% probability of Inter-Tier Migration \* 4 years = \$640.00

#### **Tradeline 3**

No Credit Injury \*\*\*\*\*No Credit Impact Damages

Total Credit Impact Damages for hypothetical consumer = \$749.95 + \$640 = \$1,389.95

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